

REMARKS

The application has been carefully reviewed in light of the Office Action dated October 16, 2006. Claims 14-24 are pending. Claims 1-13 have been canceled without prejudice, waiver, or disclaimer. Claim 14 has been amended. No new matter is believed to be added by these amendments. In addition, unless a passage of an amendment is specifically discussed below in connection with one or more cited references, Applicants respectfully submit that the amendments to the claims should be constructed as being submitted merely to clarify the invention rather than as a limitation submitted to overcome a cited reference. Since the Office Action was deemed Final, the Examiner is respectfully requested to consider the Amendments and Remarks.

Rejection under 35 U.S.C. § 112

Claims 14-24 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which the Applicant regards as his invention. The Examiner states that, in Claim 14, the phrase “a horizontal vapor outlet defined by a plurality of holes therein the lateral surface” is unclear. Claim 14 has been amended, as requested by the Examiner, to read “a horizontal vapor outlet defined by a plurality of holes in the lateral surface.” Applicant believes that this amendment clarifies the meaning of the claim.

Rejection under 35 U.S.C. § 103

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Witzman (U.S. Patent No. 6,202,591) in view of Nakabayashi (JP 2001-192293), and Baxter (U.S. Patent No. 5,803,976), as well as Roblin (U.S. Patent No. 3,672,327) taken in view of Witzman, Baxter, and Cole (U.S. Patent No. 3,690,933).

The Office Action fails to establish a *prima facie* case of obviousness of the subject matter of amended Claim 14. Courts have generally recognized that a showing of *prima facie* of obviousness necessitates three requirements: (i) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine the references' teachings; (ii) a reasonable expectation of success; and (iii) the prior art references must teach or suggest all of the claim limitations. See e.g., *In re Dembiczak*, 175 F. 3d 994 (Fed. Cir. 1999); *In re Rouffet*, 149 F.3d. 1350, 1355 (Fed. Cir. 1998); *Pro-Mold & tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996).

The combination of references used in the rejection of Claim 14 fails at least one of the above noted prongs of obviousness. None of the references teach a vaporizer housing comprising "a plurality of external cooling pipes extending substantially the elongate length of the nozzle pipe, wherein at least a portion each of the external cooling pipes is positioned substantially parallel to a longitudinal axis of the elongate nozzle pipe." Witzman, as well as Nakabayashi, has cooling pipes which surround the nozzle pipe and the heat shield like a spiral. A spiral arrangement of the cooling pipes cannot be used with the nozzle pipe as in Fig. 14a of Witzman because the cooling pipes would not only cool the heat shield, but also the opening forming the nozzle, causing the vapor to condense and to deteriorate the deposition rate. There is no teaching or suggestion in any of the references to have the cooling pipes extend along the elongate portion of the nozzle pipe and parallel to its longitudinal axis. This arrangement achieves optimal heat concentration onto the nozzle pipe with minimal impact on the outlet of vapor that exits through the holes in the lateral side of the nozzle pipe. Further, the construction of the cited references in this manner requires hindsight reasoning, which the Federal Circuit has explicitly rejected. See *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992) ("Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious."). Likewise, the claims that depend therefrom the respective independent Claim 14 would not be rendered obvious. See *In re Fine*, 5 U.S.P.Q.2d

1569, 1600 (Fed. Cir. 1988) ("Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.").

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Payment in the amount of \$910.00 (\$120.00 for a one-month extension of time fee, and \$790.00 for a RCE filing fee) is enclosed. No additional fees are believed to be due; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Anthony J. DoValé, Jr.", written over a horizontal line.

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